SOIL REMEDY ALTERNATIVE XX: SOIL VAPOR EXTRACTION (Capitol Costs)

Original acres:	1.50			Total:	\$1,432,196	\$852,920
RADD acres:	0.8	DADD	Original	BADD		
Power to Site	Original	RADD	Original	RADD	\$25,000	\$25,000
Assume	1	1 to drop electrical conncection to system, including:			Ψ20,000	Ψ20,000
		- Installation by a qualified electrician;				
		- Installation of main disconnect;				
		- Installation of an electrical meter face;				
SVE System Equipment					\$225.000	\$148,500
Assume	1	Prewired skid mounted 10000 scfm SVE system, including:			+ -,	+ -/
		2 X 500 Hp PD Blowers				
		2 X 500 gallon vapor/liquid separator with transfer pump				
		5,000 gallon holding tank				
		2 X 5000 lb carbon vessels				
		Control system w/ telemetry				
SVE System Installation					\$651,682	\$356,217
Assume	131	70 SVE wells at	\$3,366.00	\$3,366.00 per well	\$440,946	\$235,171
Assume	4	2 truck loads of IDW	\$385.00	\$385.00 per load	\$1,540	\$821
Assume	5	3 tons of hazardous IDW	\$132.00	\$132.00 per ton	\$660	\$352
Assume	44	23 tons of non-hazardous IDW	\$38.00	•	\$1,672	\$892
Assume	24	13 IDW profile samples	\$758.00		\$18,192	\$9,702
Assume	1,476	787 feet of trenching at	\$30.00		\$44,280	\$23,616
Assume	1,476	787 feet of piping at	\$30.00	•	\$44,280	
Assume	1,476	787 feet of resurfacing at	\$12.00	•	\$17,712	\$9,446
Assume	131	70 wellhead fittings at	\$400.00	•	\$52,400	
Assume	400	213 sqft concrete pad at	\$11.00	•	\$4,400	\$2,347
Assume	1	0.5 fencing to enclose system	\$3,400.00		\$3,400	\$1,133
Assume	8	4 TO-14 Analysis at Start-up	\$275.00		\$2,200	\$1,173
Assume	1	1 Air Emissions Permit	\$20,000.00	\$20,000.00 lump sum	\$20,000	\$20,000
Installation Direction and Oversight					\$143,315	\$76,435
Assume	655	349 Project Scientist I	\$113	\$113 per ton delivered	\$74,015	
Assume	295	157 Senior Technician	\$86	•	\$25,370	
Assume	76	41 hours of travel to/from the site	\$105	•	\$7,980	\$4,256
Assume	95	51 per diem/lodging/truck/fuel	\$260	•	\$24,700	\$13,173
Assume	10	5 airfare and parking costs of	\$650	•	\$6,500	\$3,467
Assume	19	10 field supplies cost of	\$250	•	\$4,750	
Project Management & Reporting					\$148.500	\$104,615
Assume	1	1 Installation Report & Drawings	\$40.000.00	\$40,000.00 Lump Sum	\$40,000	
Assume	1	1 AMEC project management at 10% of all other cost	+ ,	, 	\$108,500	
8. Contingency					\$238.699	\$142,153
Assume	1	1 Continegency	20%			\$142,153
	•		2370		+ _55,556	Ţ <u>_</u> , . 50

Original RADD

Assume 2 1 VOC in water analysis \$125 \$125 per sample \$250 \$133 Assume 2 1 SVOC in water analysis \$250 \$250 per sample \$250 \$133 Assume 2 1 RCRA metals in water analysis \$100 \$100 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$100 \$100 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$100 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$110 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$110 \$110 per sample \$120 \$140 Assume \$110 \$110 per sample \$120 \$140 \$140 Assume \$110 \$100 Assume \$110 Assum	Original acres:	1.50			Total:	\$516,715	\$324,430
1. Utilities/Carbon	RADD acres:						
Assume	A DEFE - Oad -	Original	RADD	Original	RADD	#075 000	# 407.040
Assume \$760 8,760 System run-time (hours/year) Assume \$0.10 0 per changes at \$3,500 per change \$14,000 \$30,649 Assume \$0.10 0 per changes at \$3,500 per change \$14,000 \$30,649 Assume \$2 1 VOC in water analysis \$250 \$250 per sample \$250 \$234 Assume \$2 1 SVOC in water analysis \$250 \$250 per sample \$250 \$313 Assume \$2 1 SVOC in water analysis \$250 \$250 per sample \$250 \$313 Assume \$2 1 SVOC in water analysis \$250 \$250 per sample \$250 \$313 Assume \$2 1 SVOC in water analysis \$500 \$60 per sample \$200 \$107 Assume \$2 1 TPCH in water analysis \$60 \$60 per sample \$200 \$107 Assume \$2 1 TPCH in water analysis \$500 \$60 \$60 per sample \$200 \$107 Assume \$2 1 TPCH in water analysis \$500 \$60 \$60 per sample \$200 \$107 Assume \$2 1 TPCH in water analysis \$500 \$60 \$60 per sample \$200 \$117 Assume \$2 1 TPCH in water analysis \$110 \$110 per sample \$200 \$117 Assume \$2 1 TPCH in water analysis \$110 \$110 per sample \$200 \$117 Assume \$2 1 TPCH in water analysis \$275 \$275 per sample \$200 \$117 Assume \$4 1 1 technician \$275 \$275 per sample \$200 \$117 Assume \$4 1 1 technician \$275 \$275 per sample \$200 \$		400	400 Total CV/C avatam harranawar			\$275,298	\$137,649
Assume \$0.10 0 per kilowatt hour \$1 0 per kilowatt hour \$2.61.298 \$13.06.49			· · · · · · · · · · · · · · · · · · ·				
Assume 4 4 Carbon changes at \$3,500 per change \$14,000 \$7,000 2. Fluid Profiling/Air Emissions Analytical Costs 2. 1 VOC in water analysis			, , ,		Floridantant	# 004 000	# 400.040
2. Fluid Profiling/Air Emissions Analytical Costs \$4,590 \$2,448 Assume 2 1 VOC in water analysis \$125 \$125 per sample \$250 \$133 Assume 2 1 SVOC in water analysis \$250 \$250 per sample \$200 \$107 Assume 2 1 RCRA metals in water analysis \$100 \$100 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$60 \$60 per sample \$20 \$117 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 1 1 technician \$275 per sample \$220 \$117 Assume 1 1 technician \$86,963		•	·	#0.500			. ,
Assume 2 1 VOC in water analysis \$125 \$125 per sample \$250 \$133 Assume 2 1 SVOC in water analysis \$250 \$250 per sample \$250 \$133 Assume 2 1 RCRA metals in water analysis \$100 \$100 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$100 \$100 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$100 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$100 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$110 \$110 per sample \$120 \$140 Assume 2 1 TPH in water analysis \$110 \$110 per sample \$120 \$140 Assume \$110 \$110 per sample \$120 \$140 \$140 Assume \$110 \$100 Assume \$110 Assum	Assume	4	4 Carbon changes at	\$3,500	per change	\$14,000	\$7,000
Assume 2 1 SVOC in water analysis \$250 \$250 per sample \$500 \$267 Assume 2 1 RCRA metals in water analysis \$100 \$100 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$600 \$60 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$600 \$60 per sample \$120 \$64 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 12 6 TO-14 analysis \$110 \$110 per sample \$220 \$117 Assume \$12 6 TO-14 analysis \$275 \$275 per sample \$3,300 \$1,760 \$1,	2. Fluid Profiling/Air Emissions Analytical Costs					\$4,590	\$2,448
Assume 2 1 RCRA metals in water analysis \$100 \$100 per sample \$200 \$107 Assume 2 1 TPH in water analysis \$60 \$60 per sample \$120 \$64 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 2 1 RCI in water analysis \$110 \$110 per sample \$220 \$117 Assume 12 6 TO-14 analysis \$275 \$275 per sample \$3,300 \$1,760 \$3,500	Assume	2				\$250	\$133
Assume 2 1 TPH in water analysis \$60 \$60 per sample \$120 \$64 Assume 2 1 RCI in water analysis \$110 per sample \$220 \$117 \$110 per sample \$220 \$117 \$117 per sample \$220 \$117 \$110 per sample \$220 \$117 \$220 per sample \$220 \$117 \$220 per sample \$220 \$120 per sample \$220 \$220 per sample \$220 per sample \$220 p	Assume	2	1 SVOC in water analysis	\$250	\$250 per sample	\$500	\$267
Assume 2 1 RCl in water analysis \$110 \$110 per sample \$220 \$117 Assume \$275 \$275 per sample \$3,300 \$1,760 \$3,300 \$1,760 \$3,300 \$1,760 \$3,300 \$1,760 \$3,300 \$3,300 \$1,760 \$3,300 \$3,300 \$1,760 \$3,300 \$3,300 \$1,760 \$3,300 \$3,300 \$3,760 \$3,300 \$3,300 \$3,760 \$3,300 \$3,300 \$3,760 \$3,300 \$3,300 \$3,300 \$3,760 \$3,300 \$	Assume	2	1 RCRA metals in water analysis	\$100	\$100 per sample	\$200	\$107
Assume 12 6 TO-14 analysis \$275 per sample \$3,300 \$1,760 3. System Operation Assume 1 1 technician Assume 1 1 technician Assume 6 6 hours of travel to/from the site from Houston, TX \$86 \$86 per hour \$516 \$516 \$516 \$516 \$516 \$516 \$516 \$516	Assume	2	1 TPH in water analysis	\$60	\$60 per sample	\$120	\$64
Section Sect	Assume	2	1 RCI in water analysis	\$110	\$110 per sample	\$220	\$117
Assume 1 1 technician Assume 6 6 hours of travel to/from the site from Houston, TX \$86 \$86 per hour \$516 \$516 Assume 32 17 hours of system inspection, sampling, and maintenance \$88 \$88 per hour \$2,816 \$1,502 Assume 5 3 per diem/lodging/truck/fuel \$260 \$260 per day \$1,300 \$693 Assume 1 1 airfare and parking costs of \$650 \$650 round trip \$650 \$650 Assume 1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume 12 12 events at \$5,318 \$5,318 per event \$65,316 \$65,316 Assume 1 1 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147 4. Fluid Disposal \$1,000 \$2,133 gallons of hazardous water disposal \$2.50 \$2.50 per gallon \$10,000 \$5,333 Assume 4,000 \$2,133 gallons of hazardous water disposal \$2.50 \$2.50 per gallon \$10,000 \$5,333 Assume 4,000 \$2,133 gallons of hazardous water di	Assume	12	6 TO-14 analysis	\$275	\$275 per sample	\$3,300	\$1,760
Assume 6 6 6 hours of travel to/from the site from Houston, TX \$86 \$86 per hour \$516 \$16 Assume 32 17 hours of system inspection, sampling, and maintenance \$88 \$88 per hour \$2,816 \$1,502 Assume 5 3 per diem/lodging/truck/fuel \$260 \$260 per day \$1,300 \$693 Assume \$260 \$260 per day \$1,300 \$693 Assume \$1 1 airfare and parking costs of \$650 \$650 found trip \$650 \$650 Assume \$1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume \$12 12 events at \$5,318 \$5,318 \$5,318 per event \$63,816 \$63,816 Assume \$1 1 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147	3. System Operation					\$86,963	\$86,963
Assume 32 17 hours of system inspection, sampling, and maintenance \$88 \$88 per hour \$2,816 \$1,502 Assume 5 3 per diem/lodging/truck/fuel \$260 \$260 per day \$1,300 \$693 Assume 1 1 airfare and parking costs of \$650 \$650 round trip \$650 \$650 Assume 1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume 12 12 events at \$5,318 \$5,318 per event \$63,816 <td>Assume</td> <td>1</td> <td>1 technician</td> <td></td> <td></td> <td></td> <td></td>	Assume	1	1 technician				
Assume 5 3 per diem/lodging/truck/fuel \$260 \$260 per day \$1,300 \$693 Assume 1 1 airfare and parking costs of \$650 \$650 round trip \$650 \$650 Assume 1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume 5,318 \$5,318 per event \$63,816 \$63,816 Assume 12 12 events at \$5,318 \$5,318 per event \$63,816 \$63,816 Assume 11 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147 \$23,147 4. Fluid Disposal \$12,600 \$6,720 Assume 4,000 2,133 gallons of hazardous water disposal \$2.50 \$2.50 per gallon \$10,000 \$5,333 Assume 20 11 hours of vacuum truck (includes transport) \$95 \$95 per hour \$1,900 \$1,013 Assume 21 Truck washout \$350 \$350 each \$700 \$373 5. Project Management & Reporting \$51,145 \$36,578 Assume 4 A System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 4 A System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 AMEC project management at 10% of all other cost \$39,145 \$24,578	Assume	6	6 hours of travel to/from the site from Houston, TX	\$86	\$86 per hour	\$516	\$516
Assume 1 1 airfare and parking costs of \$650 \$650 round trip \$650 \$650 Assume 1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume 12 12 events at \$5,318 \$5,318 per event \$63,816 \$63,816 Assume 1 1 1 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147 \$23,147 \$23,147 \$23,147 lump sum \$23,147 \$23,1	Assume	32	17 hours of system inspection, sampling, and maintenance	\$88	\$88 per hour	\$2,816	\$1,502
Assume 1 1 field supply cost of \$100 \$100 per inspection \$100 \$100 Assume 12 12 events at \$5,318 \$5,318 per event \$63,816 \$63,816 \$63,816 \$Assume 1 1 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147 \$23,14	Assume	5	3 per diem/lodging/truck/fuel	\$260	\$260 per day	\$1,300	\$693
Assume 12 12 events at \$5,318 \$5,318 per event \$63,816 \$63,816 \$43,816 \$63,816	Assume	1	1 airfare and parking costs of	\$650	\$650 round trip	\$650	\$650
Assume 1 1 1 10% of wells to be replaced annually at 50% cost \$23,147 \$23,147 lump sum \$23,147	Assume	1	1 field supply cost of	\$100	\$100 per inspection	\$100	\$100
4. Fluid Disposal Assume 4,000 2,133 gallons of hazardous water disposal Assume 20 11 hours of vacuum truck (includes transport) Assume 312,600 \$6,720 \$5,333 \$6,333 \$1,900 \$1,9	Assume	12	12 events at	\$5,318	\$5,318 per event	\$63,816	\$63,816
Assume 4,000 2,133 gallons of hazardous water disposal \$2.50 \$2.50 per gallon \$10,000 \$5,333 Assume 20 11 hours of vacuum truck (includes transport) \$95 \$95 per hour \$1,900 \$1,013 Assume 2 1 Truck washout \$350 \$350 each \$700 \$373 5. Project Management & Reporting \$51,145 \$36,578 Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 8. Contingency \$86,119 \$54,072	Assume	1	1 10% of wells to be replaced annually at 50% cost	\$23,147	\$23,147 lump sum	\$23,147	\$23,147
Assume 4,000 2,133 gallons of hazardous water disposal \$2.50 \$2.50 per gallon \$10,000 \$5,333 Assume 20 11 hours of vacuum truck (includes transport) \$95 \$95 per hour \$1,900 \$1,013 Assume 2 1 Truck washout \$350 \$350 each \$700 \$373 5. Project Management & Reporting \$51,145 \$36,578 Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 8. Contingency \$86,119 \$54,072	4. Fluid Disposal					\$12,600	\$6,720
Assume 2 1 Truck washout \$350 \$350 each \$700 \$373 5. Project Management & Reporting \$51,145 \$36,578 Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 8. Contingency \$86,119 \$54,072	Assume	4,000	2,133 gallons of hazardous water disposal	\$2.50	\$2.50 per gallon	\$10,000	\$5,333
5. Project Management & Reporting \$51,145 \$36,578 Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 8. Contingency \$86,119 \$54,072	Assume	20	11 hours of vacuum truck (includes transport)	\$95	\$95 per hour	\$1,900	\$1,013
Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 \$8. Contingency \$86,119 \$54,072	Assume	2	1 Truck washout	\$350	\$350 each	\$700	\$373
Assume 4 4 System operation report \$3,000 \$3,000 Lump Sum \$12,000 \$12,000 Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 \$8. Contingency \$86,119 \$54,072	5. Project Management & Reporting					\$51,145	\$36,578
Assume 1 1 AMEC project management at 10% of all other cost \$39,145 \$24,578 8. Contingency \$86,119 \$54,072		4	4 System operation report	\$3,000	\$3,000 Lump Sum		\$12,000
			· · · · · · · · · · · · · · · · · · ·	. ,			\$24,578
	8. Contingency					\$86.119	\$54.072
	<u> </u>	1	1 Continegency	20%			\$54,072

Original RADD

SOIL REMEDY ALTERNATIVE XX: SOIL VAPOR EXTRACTION (Decommissioning Costs)

Original acres: RADD acres:	1.50 0.8			Total:	Original I \$374,675	RADD \$232,444
	Original R	ADD	Original	RADD		
System Decommissioning					\$157,245	\$84,331
Assume	1	1 Mob/Demob	\$1,000	\$1,000 each	\$1,000	\$1,000
Assume	30	16 Equipment Rental	\$350	\$350 days	\$10,500	\$5,600
Assume	30	16 Labor (4 man crew, 10 hrs/day)	\$1,800	\$1,800 days	\$54,000	\$28,800
Assume	30	16 Total days of contractor per diem (4 man crew)	\$130	\$130 man/day	\$3,900	\$2,080
Assume	13	7 truck loads of waste	\$385	\$385 per load	\$5,005	\$2,669
Assume	20	11 tons of hazardous IDW	\$132	\$132 per ton	\$2,640	\$1,408
Assume	180	96 tons of non-hazardous IDW	\$38	\$38 per ton	\$6,840	\$3,648
Assume	131	70 Wells plugged and abandoned (est. depth 20 ft)	\$560	\$560 each	\$73,360	\$39,125
2. AMEC Oversight					\$23,442	\$13,109
Assume	20	11 per diem/lodging/truck/fuel	\$260	\$260 per day	\$5,200	\$2,773
Assume	197	105 hours Senior Technician at	\$86	\$86 per hour	\$16,942	\$9,036
Assume	2	2 airfare	\$650	\$650 per trip	\$1,300	\$1,300
3. Confirmation Sampling and Reporting					\$53,158	\$28,654
Assume	41	22 samples (24 samples per acre)				
Assume	41	22 Confirmation sample	\$640	\$640 per sample	\$26,240	\$13,995
Assume	6	3 days of Geoprobe	\$2,500	\$2,500 per day	\$15,000	\$8,000
Assume	10	5 hours per technician/day for	6	6 days per event		
Assume	6	3 hours sample shipping at	1	1 per event		
Assume	12	6 hours mob for technician at	1	1 per event		
Assume	78	42 hours for technician at	\$86	\$86 per hour	\$6,708	\$3,578
Assume	6	3 per diem/lodging/truck/fuel	\$260	\$260 per event	\$1,560	\$832
Assume	1	1 airfare	\$650	\$650 per trip	\$650	\$650
Assume	6	3 days renatl equipment at	\$500	\$500 per day	\$3,000	\$1,600
5. Project Management & Reporting					\$78,385	\$67,609
Assume	1	1 Annual Report	\$50,000	\$50,000 per report	\$50,000	\$50,000
Assume	1	1 AMEC project management at 10% of all other cost			\$28,385	\$17,609
8. Contingency					\$62,446	\$38,741
Assume	1	1 Continegency	20%		\$62,446	\$38,741

Capitol \$

\$1,432,196 \$852,920

Annual \$ \$516,715 \$324,430

Decommision \$ \$374,675 \$232,444

TOTAL \$: \$2,323,587 \$1,409,794

SOIL REMEDY ALTERNATIVE S4c: SOIL VAPOR EXTRACTION (Capitol Costs)

re	1.50 emedy area: 0.8	0.8	acres			Total:	\$1,432,196	\$806,866
		ADD		Original	RADD			
Power to Site							\$25,000	\$25,000
Assume	1	1	to drop electrical conncection to system, including: - Installation by a qualified electrician; - Installation of main disconnect; - Installation of an electrical meter face;					
2. SVE System Equipment							\$225,000	\$112,500
Assume	1	1	Prewired skid mounted 10000 scfm SVE system, including: 1 X 500 Hp PD Blowers 1 X 500 gallon vapor/liquid separator with transfer pump 2,500 gallon holding tank 2 X 2500 lb carbon vessels Control system w/ telemetry				¥==5,222	· · · =, · · · ·
3. SVE System Installation							\$651,682	\$357,328
Assume	131	70	SVE wells at	\$3,366.00	\$3,366	per well	\$440,946	\$235,171
Assume	4	2	truck loads of IDW	\$385.00	\$385	per load	\$1,540	\$821
Assume	5	3	tons of hazardous IDW	\$132.00		per ton	\$660	\$352
Assume	44	23	tons of non-hazardous IDW	\$38.00		per ton	\$1,672	\$892
Assume	24	13	IDW profile samples	\$758.00		per sample	\$18,192	\$9,702
Assume	1,476	787	feet of trenching at	\$30.00		per linear foot	\$44,280	\$23,616
Assume	1,476	787	feet of piping at	\$30.00		per linear foot	\$44,280	\$23,616
Assume	1,476	787	feet of resurfacing at	\$12.00		per linear foot	\$17,712	\$9,446
Assume	131	70	wellhead fittings at	\$400.00		per well	\$52,400	\$27,947
Assume	400	213	sqft concrete pad at	\$11.00		per sqft	\$4,400	\$2,347
Assume	1	1.0	fencing to enclose system	\$3,400.00			\$3,400	\$2,244
Assume	8	4	TO-14 Analysis at Start-up	\$275.00		per sample	\$2,200	\$1,173
Assume	1	1	Air Emissions Permit	\$20,000.00	\$20,000	lump sum	\$20,000	\$20,000
4. Installation Direction and C	Oversight						\$143,315	\$76,435
Assume	655	349	Project Scientist I	\$113	\$113	per ton delivered	\$74,015	\$39,475
Assume	295	157	Senior Technician	\$86	\$86	per hour	\$25,370	\$13,531
Assume	76	41	hours of travel to/from the site	\$105	\$105	per hour	\$7,980	\$4,256
Assume	95	51	per diem/lodging/truck/fuel	\$260	\$260	per hour	\$24,700	\$13,173
Assume	10	5	airfare and parking costs of	\$650	\$650	per hour	\$6,500	\$3,467
Assume	19	10	field supplies cost of	\$250	\$250	per hour	\$4,750	\$2,533
5. Project Management & Re	porting						\$148,500	\$101,126
Assume	1	1	Installation Report & Drawings	\$40,000.00	\$40,000	Lump Sum	\$40,000	\$40,000
Assume	1	1	AMEC project management at 10% of all other cost	, ,		·	\$108,500	\$61,126
8. Contingency							\$238,699	\$134,478
Assume	1	1	Continegency	20%			\$238,699	\$134,478

SOIL REMEDY ALTERNATIVE S4c: SOIL VAPOR EXTRACTION (Annual Costs)

romody areas	1.50 0.8	0.8				Total:	\$516,715	\$278,013
remedy area:	Original	0.8	acres	Original				
1. Utilities/Carbon	Original			Original			\$275,298	\$137,649
Assume	400	400	Total SVE system horsepower				, ,	·
Assume	8760 4	4,380	System run-time (hours/year)					
Assume	\$0.10	0	per kilowatt hour			Electrical Total	\$261,298	\$130,649
Assume	4	4	Carbon changes at	\$3,500		per change	\$14,000	\$7,000
2. Fluid Profiling/Air Emissions Analytical Costs							\$4,590	\$4,590
Assume	2	2	VOC in water analysis	\$125	\$125	per sample	\$250	\$250
Assume	2	2	SVOC in water analysis	\$250	\$250	per sample	\$500	\$500
Assume	2	2	RCRA metals in water analysis	\$100	\$100	per sample	\$200	\$200
Assume	2	2	TPH in water analysis	\$60	\$60	per sample	\$120	\$120
Assume	2	2	RCI in water analysis	\$110	\$110	per sample	\$220	\$220
Assume	12	12	TO-14 analysis	\$275	\$275	per sample	\$3,300	\$3,300
3. System Operation							\$86,963	\$49,657
Assume	1	1	technician				ψ00,903	Ψ+3,037
Assume	6	3	hours of travel to/from the site from Houston, TX	\$86	\$86	per hour	\$516	\$258
Assume	32	16	hours of system inspection, sampling, and maintenance	\$88	\$88	per hour	\$2,816	\$1,408
Assume	5	3	per diem/lodging/truck/fuel	\$260	\$260	per day	\$1,300	\$693
Assume	1	1	airfare and parking costs of	\$650	\$650	round trip	\$650	\$650
Assume	1	1	field supply cost of	\$100	\$100	per inspection	\$100	\$100
Assume	12	12	events at	\$5,318	\$5,318	per event	\$63,816	\$37,312
Assume	1	1	10% of wells to be replaced annually at 50% cost	\$23,147		lump sum	\$23,147	\$12,345
4. Fluid Disposal							\$12,600	\$6,720
Assume	4,000 2	2 122	gallons of hazardous water disposal	\$2.50	\$2.50	per gallon	\$12,000	\$5,333
Assume	20	11	hours of vacuum truck (includes transport)	\$2.50 \$95	\$2.50 \$95	per gallon per hour	\$1,900	\$1,013
Assume	20	1	Truck washout	\$350	\$350	each	\$7,900	\$373
Assume	2		Truck washout	φ330	φυσυ	eacii	φ100	φυιυ
5. Project Management & Reporting							\$51,145	\$33,062
Assume	4	4	System operation report	\$3,000	\$3,000	Lump Sum	\$12,000	\$12,000
Assume	1	1	AMEC project management at 10% of all other cost				\$39,145	\$21,062
8. Contingency							\$86,119	\$46,336
Assume	1	1	Continegency	20%			\$86,119	\$46,336

SOIL REMEDY ALTERNATIVE S4c: SOIL VAPOR EXTRACTION (Decommissioning Costs)

remedy area:	1.50 0.8	0.8	acres			Total:	\$374,675	\$232,444
remedy area.	Original	0.0	acies	Original				
System Decommissioning	Ū			Ū			\$157,245	\$84,331
Assume	1	1	Mob/Demob	\$1,000	\$1,000	each	\$1,000	\$1,000
Assume	30	16	Equipment Rental	\$350	\$350	days	\$10,500	\$5,600
Assume	30	16	Labor (4 man crew, 10 hrs/day)	\$1,800	\$1,800	days	\$54,000	\$28,800
Assume	30	16	Total days of contractor per diem (4 man crew)	\$130	\$130	man/day	\$3,900	\$2,080
Assume	13	7	truck loads of waste	\$385	\$385	per load	\$5,005	\$2,669
Assume	20	11	tons of hazardous IDW	\$132	\$132	per ton	\$2,640	\$1,408
Assume	180	96	tons of non-hazardous IDW	\$38	\$38	per ton	\$6,840	\$3,648
Assume	131	70	Wells plugged and abandoned (est. depth 20 ft)	\$560	\$560	each	\$73,360	\$39,125
2. AMEC Oversight							\$23,442	\$13,109
Assume	20	11	per diem/lodging/truck/fuel	\$260	\$260	per day	\$5,200	\$2,773
Assume	197	105	hours Senior Technician at	\$86	\$86	per hour	\$16,942	\$9,036
Assume	2	2	airfare	\$650	\$650	per trip	\$1,300	\$1,300
3. Confirmation Sampling and Reporting							\$53,158	\$28,654
Assume	41	22	samples (24 samples per acre)				ψου,	Ψ=0,00.
Assume	41	22	Confirmation sample	\$640	\$640	per sample	\$26,240	\$13,995
Assume	6	3	days of Geoprobe	\$2,500	\$2,500	per day	\$15,000	\$8,000
Assume	10	5	hours per technician/day for	6	6	days per event	, .,	* - ,
Assume	6	3	hours sample shipping at	1	1	per event		
Assume	12	6	hours mob for technician at	1	1	per event		
Assume	78	42	hours for technician at	\$86	\$86	per hour	\$6,708	\$3,578
Assume	6	3	per diem/lodging/truck/fuel	\$260	\$260	per event	\$1,560	\$832
Assume	1	1	airfare	\$650	\$650	per trip	\$650	\$650
Assume	6	3	days renatl equipment at	\$500	\$500	per day	\$3,000	\$1,600
5. Project Management & Reporting							\$78,385	\$67,609
Assume	1	1	Annual Report	\$50,000	\$50,000	per report	\$50,000	\$50,000
Assume	1	1	AMEC project management at 10% of all other cost	, ,	, ,	1 1	\$28,385	\$17,609
8. Contingency							\$62,446	\$38,741
Assume	1	1	Continegency	20%			\$62,446	\$38,741
						Capitol \$	\$1,432,196	\$852,920
						Annual \$	\$516,715	\$324,430
						Decommision \$	\$374,675	\$232,444